“Analytical study of Agricultural Policy in Select Drought Prone Areas of Marathwada Region”

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1. Introduction

The history of agriculture in India dates back to the Rigveda[1]. Today, India ranks second worldwide in farm output. Agriculture and allied sectors like forestry and fisheries accounted for 13.7% of the GDP (gross domestic product) in 2013,[2]about 50% of the workforce.[3][4]The economic contribution of agriculture to India's GDP is steadily declining with the country's broad-based economic growth. Still, agriculture is demographically the broadest economic sector and plays a significant role in the overall socio-economic fabric of India.

Agriculture plays a vital role in India’s economy. Over 58 per cent of the rural households depend on agriculture as their principal means of livelihood. Agriculture, along with fisheries and forestry, is one of the largest contributors to the Gross Domestic Product (GDP)[5]. In country like India, which has the capacity to produce three crops a year, the ceaseless case of farmers suicides are an ignominious fail[6].

The government's response and relief packages have generally been ineffective, misdirected and flawed, states Surinder Sud.[7]It has focused on credit and loan, rather than income, productivity and farmer prosperity. Assistance in paying off outstanding principal and interest helps the money lenders, but has failed to create reliable and good sources of income for the farmer going forward. The usurious moneylenders continue to offer loans at interest rates between 24 and 50 percent, while income generating potential of the land the farmer works on has remained low and subject to weather conditions.[8] Sud states that the government has failed to understand that debt relief just postpones the problem and a more lasting answer to farmer distress can only come from reliable income sources, higher crop yields per hectare, irrigation and other infrastructure security.[8]Golait, in a Reserve Bank of India paper,[9]acknowledged the positive role of crop diversification initiative announced in government's response to reports of farmer suicides.

2. Review of literature

Indian agriculture includes a mix of traditional to modern farming techniques. In some parts of India, traditional use of cattle to plough remains in use.Since 2002, India has become the world's largest manufacturer of tractors with 29% of world's output in 2013; it is also the world's largest tractor market.[10][11] Above a tractor in use in north India.

"Slow agricultural growth is a concern for policymakers as some two-thirds of India’s people depend on rural employment for a living. Current agricultural practices are neither economically nor environmentally sustainable and India's yields for many agricultural commodities are low. Poorly maintained irrigation systems and almost universal lack of good extension services are among the factors responsible. Farmers' access to markets is hampered by poor roads, rudimentary market infrastructure, and excessive regulation."

— World Bank: "India Country Overview 2008”[12]

"With a population of just over 1.2 billion, India is the world's largest democracy. In the past decade, the country has witnessed accelerated economic growth, emerged as a global player with the world's fourth largest economy in purchasing power parity terms, and made progress towards achieving most of the Millennium Development Goals. India's integration into the global economy has been accompanied by impressive economic growth that has brought significant economic and social benefits to the country. Nevertheless, disparities in income and human development are on the rise. Preliminary estimates suggest that in 2009-10 the combined all India poverty rate was 32 % compared to 37 % in 2004-05. Going forward, it will be essential for India to build a productive, competitive, and diversified agricultural sector and facilitate rural, non-farm entrepreneurship and employment. Encouraging policies that promote competition in agricultural marketing will ensure that farmers receive better prices."

— World Bank: "India Country Overview 2011"[13]

A 2003 analysis of India's agricultural growth from 1970 to 2001 by the Food and Agriculture Organization identified systemic problems in Indian agriculture. For food staples, the annual growth rate in production during the six-year segments 1970-76, 1976–82, 1982–88, 1988–1994, 1994-2000 were found to be respectively 2.5, 2.5, 3.0, 2.6, and 1.8% per annum. Corresponding analyses for the index of total agricultural production show a similar pattern, with the growth rate for 1994-2000 attaining only 1.5% per annum.[14]

According to the World Bank, Indian branch's *Priorities for Agriculture and Rural Development*, India's large agricultural subsidies are hampering productivity-enhancing investment. Overregulation of agriculture has increased costs, price risks and uncertainty. Government intervenes in labour, land, and credit markets. India has inadequate infrastructure and services.[15]The World Bank also says that the allocation of water is inefficient, unsustainable and inequitable. The irrigation infrastructure is deteriorating.[14] The overuse of water is being covered by over-pumping aquifers but, as these are falling by one foot of groundwater each year, this is a limited resource.[16]The Intergovernmental Panel on Climate Change released a report that food security may be a big problem in the region post 2030.[17]

India has suffered major and worst drought over the 18th and 19th centuries, resulted millions of deaths and led to major Indian famine of 1943 and Bihar famine of 1873-1874. State affected by drought are Maharashtra, Karnataka, Andhra Pradesh, Orrisa, Gujrat,and Rajasthan, major population of these region depended on rice crop of the winter season. Due to the failure of the monsoon, some parts of Bihar and Jharkhand along with Punjab and Haryana were also affected by drought.[18]

2.1. Marathwada drought scenario: an Overview

Marathwada region has been reeling under drought condition since 2013. It is in a part of the scanty rainfall area of Central Maharashtra. The region coincides with the Aurangabad Division of Maharashtra. It includes districts of Aurangabad, Jalna, Beed, Osmanabad, Nanded, Latur, Parbhani and Hingoli. Out of these eight districts, five are the worst affected, namely Beed, Jalna, Parbhani, Nanded and Osmanabad. Marathwada region has a population of about 1.87 crore and geographical area of 64.5 thousand sq.km The region had faced several droughts in the past. Droughts have occurred in the years 1899, 1918, 1972 and 2012 onwards. The 1972 drought is in the recent past; which people still remember. In 1972, food and fodder were the

main concerns, but now drinking water is more important. It is multi-dimensional drought. Global climatic situation is also playing in the process, which was not so acute 50 years before[19].

2.1.1Consequences of drought condition in Marathwada[20].

Farmers' suicide: Because of this severe drought situation continuing for last four years, Marathwada became the graveyard of farmers. Total number of suicides in January 2016 crossed 1,000, every week 25 to 30 farmers are committing suicide. This should be treated as the national epidemic.

Agriculture is worst affected*:* Jowar and Bajra, along with other kharif crops, were completely wiped out in 2013 when monsoon failed. Along with the food crops, fruits (horticulture) also are affected. Jalna, which is known for being the biggest producer of sweet lime, has been the worst hit in the drought. Sweet limes grow in about 55,000 ha in Jalna. In 2015, there was no cultivation of sweet lime at all. Sweet lime plants require five years to bear fruits. Thus, the hard work of farmers for years together was in vain.
Two important cash crops in Marathwada namely cotton and sugarcane are also severely affected. Cotton is not water intensive crop as it can be cultivated in the dry area. In fact, 90 dry days are required before germination of cotton flowers. However, misfortune of the farmer began with the introduction of B.T. cotton. The capital input for cultivation increased for the farmers but the crop failed successively. Loan burden remained on the shoulder of the farmers. Sugarcane is a water intensive crop, planted in water deficient area. Marathwada has 70 sugar mills. Total water required for Marathwada for sugarcane cultivation is 4,300 million cubic metres. This requirement is double the storage capacity of the largest dam of Godavari. Just crushing of cane will require 17 million cubic metres water, which is enough to provide drinking water to 15.85 lakh people until next monsoon.

Intensification of water politics of Maharashtra: The problems faced by drought situation in Marathwada are due to not only natural factors but also lack of appropriate political intervention. Powerful political parties played all tricks to grab local water resource. In many cases, dam water through channels has been diverted to the particular field belonging to a powerful minister. It is the false pretension of political leaders that there is no drinking water for the resident population.

Consequence of drought on cattle*:* Apart from the people, it is the cattle who are affected by the problem. Average cattle need more than 100 rupees per day fetching them approximately 15 kg of grass and fodder. However, at present it is only 60 rupees' fodder per cattle the government has sanctioned and out of that, 50 per cent is thrashed to the godowns of the higher authorities.

2.2 Overview of Provision for the farmers in the union budget of India (From 2005-2006 to 2014-2015)[21]

2005/06
In this budget a new scheme for development/strengthening of agricultural marketing infrastructure introduced. The objective was to induce large investment from the private and cooperative sectors for setting up agricultural markets, marketing infrastructure and support service. The government launched mission2007 a national initiative comprising nearly 80 organisations with a goal to set up a knowledge centre in every village by 60th anniversary on independence day. Support for the project to be routed through NABARD.

2006/07

The command area development programme revamped. Some 20000waterbodies with a command area of 1.47 million hectares identified in first phase for repair, renovation and restoration at an estimated cpost of Rs. 4,481crore

2007/08

In 2007-08 the government allocated various funds such as 100 per cent subsidy to small and marginal farmers and 50 per cent subsidy to other farmers for diverting rain water into 'dug wells'. A sum of Rs 1,800 crore to be transferred to NABARD**.** Indian Council of Agricultural Research to set up one teaching-cum-demonstration model of water harvesting in each of the 32 selected State Agricultural Universities and Indian Council of Agricultural Research institutes. Integrated Oilseeds, Oilpalm, Pulses and Maize Development Programme to be expanded with sharper focus on scaling up the production of breeder, foundation and certified seeds. The government to fund the expansion of Indian Institute of Pulses Research, Kanpur and offer producers a capital grant or concessional financing to double production of certified seeds within a period of three years.

2008/09

In this year the government allocate policy such as Rainfed Area Development Programme allocated Rs 348 crore. An outlay of Rs 500 crore for the Micro Irrigation Scheme. A total of 14 irrigation projects approved as National Projects by the government. Irrigation and Water Resources Finance Corporation proposed to be set up, with an initial capital of Rs 100 crore contributed by the central government, to fund long-gestation major and medium irrigation projects. An allocation of Rs 644 crore for National Agriculture Insurance Scheme.

2009/10

The fund Allocation for the Accelerated Irrigation Benefit Programme (AIBP) increased by 75 per cent to 35,000 crore. Allocation for the RashtriyaKrishiVikasYojana (RKVY) stepped up by 30 per cent.Interest subvention to be continued in 2009/10 to ensure that farmers get short term crop loans uptoRs 3 lakh at 7 per cent per annum.The corpus of Rural Infrastructure Development Fund increased to Rs 14,000 crore.

2010/11

In this year the government allowed External Commercial Borrowings to be available for cold storage or cold room facility. An allocation of Rs 200 crore for sustaining the gains already made in the green revolution areas through conservation farming which involves concurrent attention to soil health, water conservation and preservation of biodiversity.

2011/12

In this year the Allocation for the RashtriyaKrishiVikasYojana increased to Rs 7,869 crore. The capital base of NABARD to be strengthened by Rs 3,000 crore in phases. The Accelerated Fodder Development Programme allocated Rs 300 crore to benefit farmers in 25,000 villages.

2012/13

The government increased The outlay for the Rashtriya KrishiVikasYojana (RKVY) to Rs 9,217 crore. **.** A sum of Rs 200 crore set aside for incentivising research with rewards.Structural changes in the Accelerated Irrigation Benefit Programme (AIBP) being made to maximise benefit from investments in irrigation projects. Allocation for AIBP stepped up by 13 per cent to Rs 14,242 crore. A new centrally sponsored scheme titled "National Mission on Food Processing" to be started in co-operation with the state governments.Allocation for the Rural Infrastructure Development Fund enhanced to Rs 20,000 crore -- of this Rs 5,000 crore earmarked exclusively for creating warehousing facilities.

2013/14

An allocation made for pilot programme on Nutri-Farms for introducing new crop varieties that are rich in micro-nutrients. A sum of Rs 3,415 crore allocated for agricultural research. An allocation of Rs 500 crore for launching a programme of crop diversification that would promote technological innovation and encourage farmers to choose crop alternatives

2014/15

The government provided An amount of Rs 100 crores set aside for "Agri-tech Infrastructure Fund". To provide institutional finance to landless farmers, finance would be provided to 5 lakh joint farming groups through NABARD. Corpus of Rural Infrastructure Development Fund raised to Rs 30,000 crores. Allocation of Rs 5,000 crore for the Warehouse Infrastructure Fund. "Long Term Rural Credit Fund" to be set up for the purpose of providing refinance support to cooperative banks and Regional Rural Banks with an initial corpus of Rs 5,000 crore. An outlay of Rs 50,000 crore for Short Term Cooperative Rural Credit

2015/16

The government allocated Rs 5,300 crore to support micro-irrigation, watershed development and the 'PradhanMantriKrishiSinchaiYojana'.Rs 25,000 crore in 2015-16 to the corpus of Rural Infrastructure Development Fund (RIDF) set up in NABARD**.** Rs 15,000 crore for Long Term Rural Credit Fund. Rs 45,000 crore for Short Term Co-operative Rural Credit Refinance Fund. Rs 15,000 crore for Short Term RRB Refinance Fund. Emphasised on need to create a National Agriculture Market for the benefit farmers, which will also have the incidental benefit of moderating price rises. Government to work with the States, in NITI, for the creation of a Unified National Agriculture Market

3. Significance of study

The marathwada region of Maharashtra is facing severe drought condition for last 3 years. This study will help to get the appropriate situation of marathwada and the policy implementation of government marathwada region. This research will help to understand the actual position of farmers and their problems, requirement, policy effectiveness.

4. Objectives of study

Objectives plays vital role in research, without any objective the research doesn't work. Objective gives the proper way and idea for the researcher, thus given below are the objective of the proposed research.

1. To study the pattern of budgetary provision for farmers.
2. To study the adequacy of provision.
3. To study the problems of farmers in Marathwada
4. To study the pattern of farming in Marathwada
5. To evaluate the policy and the needs of the farmers for suitability and effective utilization.
6. To study the needs of farmers in Marathwada
7. To find the gap between the needs and provision
8. To identify the problems and priorities of farmers.
9. To evaluate and suggest remedies for farmers.
10. To search for technological usage for betterment of farmers in Marathwada

5. Null Hypothesis

Based on review of literature the following are the tentative hypothesis for proposed research

1. The provision made for farmers are not adequate
2. The policies are framed as per need of farmers
3. The effectiveness of the policy is not satisfactory.
4. There is need of proper evaluation and improvement in policy devising mechanism.
5. There is a scope for modernization of farming and farming practices.

6. Research design and methodology

The required data for this research will be collected from primary data and secondary data Primary sources are original sources from which the researcher directly collects data that has not been previously collected. These are sources containing data which have been collected and compiled for another purpose. The secondary sources consist of readily compendia and already compiled statistical statements and reports whose data may be used by researcher for their studies

1. The primary source of data collection:

In this research the primary data will be collected through physical observation, open end interview and close end interview and questionnaire.

2. The Secondary source of data collection:

The secondary data of this research will be collected from by census report, government reports, government policies, books, journals, published and unpublished records, social sites, electronic media, internet surveys, research reports and white papers form government as well non-government sources.

Selection of samples

Out of 36 districts in Maharashtra, 21 are facing drought. In marathwada. 8 districts are drought affected they are Aurangabad, Beed, Hingoli, Jalna, Nanded, Osmanabad, Latur, Parbhani. Researcher has proposed to select approximately 40% of talukas from all eight district of marathwada, [fig.1] the 40% of talukas will be selected randomly. In this research stratified cluster sampling method will be used for selection of samples.

Total no of Districts	Aurangabad	Jalna	Nanded	Latur	Osmanabad	Hingoli	Parbhani	Beed
Total no of talukas	09	08	16	11	08	06	09	11
Sample size,40 % of talukas	04	03	06	04	03	02	04	04

Figure: 1

Data collection

The total no of talukas are 30. The researcher is proposed to take 40% of total responded. The farmers will be divided according to the land holding farms from irrigated and non-irrigated land. They are:

1. Irrigated land in taken taluka :

A. Farmers holding land below 2 acres.

B. Farmers holding land from 3-5 acres

C. Farmers holding land above 6 acres

2. Non-irrigated land in taken taluka:

    A. Farmers holding land below 2 acres.

    B. Farmers holding land from 3-5 acres

    C. Farmers holding land above 6 acres

Selection of sample

In this research their will take 36(18*2) responded from each taluka.

Total responded is 36*30(talukas) =1080

40% of total responded = 400 approx.

Hence the tentative sample size for proposed research will be 400 responded.

Data analysis:

The collected data will be analyzed and filled using scientific statistical tools such as Excel, SPSS (Statistical Packages for Social Science) software.

Suitable statistical tools will be used for selection of sample, evaluation of data, analysis, inference, conclusion. And to addition to this various tabulation and data presentation method will be used such as tables, graphs, charts and diagram.

7. Scope and limitation of research:

The research has been confined to the fallowing limitation and scope some of them are given below

1. The geographical region is restricted only to Marathwada region of Maharashtra.
2. The time period for the research will be from the year 2005-2015.
3. The primary data is collected through questionnaire so, it has own limitation.
4. The research is restricted to farming pattern in drought prone region.
5. The research is restricted to government policies of farmers in drought prone area in marathwada.

8. Chapter scheme

The thesis of proposed research will be in fallowing chapter scheme.

Chapter I – Introduction

This chapter will deals with the introduction of the research. It will give the detail information of research, objective of study, significance of study.

Chapter II - Review of literature

This chapter deals with the overall review of literature available on the particular topic. Literature is most important part of any research. The review of literature of this topic will be taken from different articles, book related to the research topic.

Chapter III - Research Methodology

This chapter will deals with various methods adopted to collect the data from various sources which may be primary and secondary sources, primary data will be collected from respondent by visiting personally at work place and secondary data will be collected from books, newspaper, reports and extensive use of internet

Chapter IV - Data Interpretation

This chapter includes interpretation of collected data.

Chapter V - Data analysis

This chapter will highlight the finding of collected data from various primary and secondary sources.

Chapter VI - Conclusion and Suggestion

This chapter will highlight the overall summary of present study, important conclusion drawn by the researcher and important suggestion will be given by the researcher to overcome the problems.

Chapter VI - References.

This chapter will give the reference to the data collected from various sources.

Chapter VII – Bibliography

This chapter gives information about the books which are referred at the time of research.

Chapter VIII- Annexure

The said research will be completed as per university rules on due course of time by the researcher.

Signature and stamp of Research Guide

Signature of Research Scholar

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